

Remarks

The February 8, 2005 Office Action rejected the claims under § 102 and 103. In view of the amendment above and arguments below, reconsideration is respectfully requested.

Clarifications

Some changes have been made to claim 1 (and thus claims 2 and 3) for purposes of greater clarity. However, these changes are not believed to affect the patentability argument.

Anticipation Rejections

Turning now to the substantive art rejections, the five anticipation rejections are all respectfully traversed. Claim 1, and thus claims 2 and 3, of the present application require an "open gel" delivery system. As explained in the specification (in paragraph [0005]) there is a distinction between a semi-enclosed gel, and an open gel system. An open gel system is defined as one "in which essentially the total available gel surface is exposed to the ambient air".

Open gel systems are desirable where a very rapid vaporization/release is desired. The more enclosed the gel, the harder it is to achieve high release rates. As the gel becomes more and more enclosed, one has a more and more limited selection of actives that can be chosen from when trying to achieve the desired level of release, and often the reduced selection will entail some compromises (e.g. cost; effectiveness). Alternatively, one may have to use expensive devices such as fans to increase the rate of release. Hence, Applicants' discovery of how to keep the advantages of an open gel system while also achieving essentially even rates of release over the life of an open gel is particularly surprising.

None of the cited references focuses on an open gel system, much less teaches one that achieves this advantage. In this regard:

(a) With reference to U.S. patent 3,910,495, the devices of this patent have a cover 14 which sits on posts 32 during dispensing. Hence, this is not an "open gel delivery system".

Moreover, the X and Y initial dimensions of the gel are identical in this design, with only the Z dimension being different. Thus, there are not three different dimensions at the initial stage.

Further, the patent does not claim to have achieved constant release rates over the life of the gel.

Hence, the patent does not anticipate the claim, nor suggest how to achieve the claimed structure or its advantages.

(b) With reference to U.S. patent 4,157,787, this patent discloses a container having an impermeable bottom and sides and a top that is always covered, albeit by a somewhat porous layer. Hence, all portions of the gel are always covered during dispensing. This cannot be considered an "open gel" delivery system.

Moreover, it should again be noted that the X and Y dimensions are identical in this patent, with only the Z dimension being different. Thus, again, there are not three different dimensions for the gel at the initial stage.

While a permeable membrane can make release rates somewhat more constant, it does so at the cost of greatly reduced dispersion rates.

(c) U.S. patent 4,809,912 depicts in Fig. 3 an essentially enclosed system. The abstract indicates that a porous membrane covers the exposed surface of the gel. Thus, the distinctions vis a vis 4,157,787 also apply here.

(d) U.S. patent 5,060,858 depicts a gel that is always enclosed on the bottom and sides with impermeable walls, and sometimes at least partially enclosed on the top. Again, this is not an "open gel" system.

Further, again, the X and Y dimensions appear identical, not different.

(e) U.S. patent 6,039,266 similarly depicts a gel that is always covered by impermeable walls on the bottom and sides, and sometimes at least partially covered on the top. Again, this is not an "open gel" system.

Hence, none of the five purported anticipatory references meet the claim language. In each case there are multiple deficiencies vis a vis the claims. Further, none suggests how to achieve the high rate of volatilization provided by an open gel system while also achieving essentially constant release rates.

Obviousness Rejection

Turning now to the obviousness rejection, the rejection based on EP 1,177,799 is respectfully traversed. To facilitate analysis we enclose herewith a copy of a translation of EP 1,177,799 we had prepared. It is hoped that a review by the Office of the English language translation will make clearer the deficiencies of this reference.

As was the case with the five other references, EP 1,177,799 does not teach an "open gel" delivery system. The gel of this publication is enclosed on the bottom and sides with impermeable walls. Even the top side has a partial grid cover which functions much like a permeable wall, except that it moves.

When using a structure like EP 1,177,799, the rate of delivery is necessarily substantially lower than that which an open gel system can provide (all other things being equal).

Further, one must incur the cost of the additional plate 4, as well as inherent variability which such a moving plate causes.

Also, the initial gel appears to have identical X and Y dimensions, and the end gel may also have identical X and Y dimensions.

Thus, again, there are multiple deficiencies between what the claim requires and what the reference teaches. Further, there is no suggestion as to how to achieve the advantages of the present invention without undesirable compromises.

In this regard, while the patent does claim a somewhat more constant evaporation rate for some period, it necessarily does so at a greatly decreased evaporation rate. Further, it would be expected that depending on how the gel shrivels that the moving plate 3 would be difficult to use in a consistent manner.

In sum, Applicants have invented a way to achieve the high release rate advantages of open gel systems with close to zero-order release patterns, without requiring significant other compromises. None of the cited art, or any of the other art of record, teaches or suggests this. Hence, all rejections should not be applied vis a vis the amended claims.

Conclusion

In view of the above amendment and remarks, reconsideration and allowance of amended claims 1-3 is respectfully requested. No additional fee is believed necessary for the entry and consideration of this amendment.

However, if one is, please charge the amount of the fee to
Deposit Account 10-0849.

Respectfully submitted,
ANITA WONGOSARI ET AL.

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By: Kristin L. Chapman
Ms. Kristin L. Chapman
Reg. No.: 38102
Attorney For Applicants
S.C. Johnson & Son, Inc.
1525 Howe Street
Racine, WI 53403-2236
(262-260-2722)

MKE\5699947